WHAT IS CLAIMED IS:

1. An amplifying circuit comprising:

an amplifier amplifying a signal received through an input terminal, and outputting the signal through an output terminal; and

a control circuit turning at least one of an input impedance and an output impedance of said amplifier into a high impedance.

2. The amplifying circuit as set forth in claim 1, wherein said control circuit is comprised of an inductor and a switch.

3. The amplifying circuit as set forth in claim 2, wherein said inductor and said switch are electrically connected in series to each other, and further electrically connected in an AC manner between said input or output terminal and a grounded voltage.

4. The amplifying circuit as set forth in claim 3, wherein said switch is comprised of a field effect transistor.

5. The amplifying circuit as set forth in claim 3, wherein said inductor has an inductance resonating in parallel with a parasitic capacity of said amplifier.

6. The amplifying circuit as set forth in claim 1, wherein said control circuit is comprised of:

at least two transmission lines including at least a first transmission line electrically connected at one end thereof to said input or output terminal, and a second transmission line grounded at one end thereof, a total length of said at least two transmission lines being equal to $K \times S$ wherein K indicates an odd number, and S indicates a quarter of a wavelength of said signal; and

a switch for selecting whether said input or output terminal is electrically connected to a grounded voltage through a transmission line having a length of K $\times$S or through a transmission line having a length shorter than K$\times$S.

7. The amplifying circuit as set forth in claim 6, wherein said transmission line having a length shorter than K$\times$S acts as an inductor having an inductance resonating in parallel with a parasitic capacity of said amplifier.

8. The amplifying circuit as set forth in claim 1, wherein said amplifier is comprised of two field effect transistors electrically connected in cascode to each other.

9. The amplifying circuit as set forth in claim 1, further comprising a field effect transistor electrically connected in series between said amplifier and a power source, said field effect transistor interrupting a current from flowing to said amplifying circuit from said power source when said amplifying circuit is off.

10. The amplifying circuit as set forth in claim 1, wherein said amplifying circuit is comprised of a differential amplifying circuit, and further comprising a field effect transistor as a constant-current source between said amplifier and a grounded voltage.

11. A gain-variable amplifying circuit comprising at least two amplifying circuits electrically connected in parallel to each other and having gains different from one another,

said amplifying circuits each comprised of:

an amplifier amplifying a signal received through an input terminal, and outputting the signal through an output terminal; and

a control circuit turning at least one of an input impedance and an output

impedance of said amplifier into a high impedance,

wherein a gain is controlled by turning at least one of said input and output impedances of an amplifying circuit(s) other than a selected amplifying circuit, into a high impedance.

12. The gain-variable amplifying circuit as set forth in claim 11, wherein said control circuit is comprised of an inductor and a switch.

13. The gain-variable amplifying circuit as set forth in claim 12, wherein said inductor and said switch are electrically connected in series to each other, and further electrically connected in an AC manner between said input or output terminal and a grounded voltage.

14. The gain-variable amplifying circuit as set forth in claim 13, wherein said switch is comprised of a field effect transistor.

15. The gain-variable amplifying circuit as set forth in claim 13, wherein said inductor has an inductance resonating in parallel with a parasitic capacity of said amplifier.

16. The gain-variable amplifying circuit as set forth in claim 11, wherein said control circuit is comprised of:

at least two transmission lines including at least a first transmission line electrically connected at one end thereof to said input or output terminal, and a second transmission line grounded at one end thereof, a total length of said at least two transmission lines being equal to $K \times S$ wherein K indicates an odd number, and S indicates a quarter of a wavelength of said signal; and

a switch for selecting whether said input or output terminal is electrically connected to a grounded voltage through a transmission line having a length of K

$\times$S or through a transmission line having a length shorter than K$\times$S.

17. The gain-variable amplifying circuit as set forth in claim 16, wherein said transmission line having a length shorter than K$\times$S acts as an inductor having an inductance resonating in parallel with a parasitic capacity of said amplifier.

18. The gain-variable amplifying circuit as set forth in claim 11, wherein said amplifier is comprised of two field effect transistors electrically connected in cascode to each other.

19. The gain-variable amplifying circuit as set forth in claim 11, further comprising a field effect transistor electrically connected in series between said amplifier and a power source, said field effect transistor interrupting a current from flowing to said amplifying circuit from said power source when said amplifying circuit is off.

20. The gain-variable amplifying circuit as set forth in claim 11, wherein said amplifying circuit is comprised of a differential amplifying circuit, and further comprising a field effect transistor as a constant-current source between said amplifier and a grounded voltage.